1. Solve the quadratic equation below. Then, choose the intervals that the solutions belong to, with $x_1 \leq x_2$ (if they exist).

$$19x^2 + 11x - 9 = 0$$

A. $x_1 \in [-0.6, -0.08]$ and $x_2 \in [0.9, 1.11]$

B. $x_1 \in [-1.65, -0.82]$ and $x_2 \in [0.27, 0.99]$

C. $x_1 \in [-20.06, -18.74]$ and $x_2 \in [8.64, 8.73]$

D. $x_1 \in [-28.81, -27.69]$ and $x_2 \in [27.6, 28.12]$

E. There are no Real solutions.

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2. Factor the quadratic below. Then, choose the intervals that contain the constants in the form $(ax + b)(cx + d); b \leq d$.

$$24x^2 + 38x + 15$$

A. $a \in [0.6, 1.5]$, $b \in [11, 20]$, $c \in [0.4, 2.5]$, and $d \in [16, 27]$

B. $a \in [3.6, 7.6]$, $b \in [0, 7]$, $c \in [4.5, 8.6]$, and $d \in [3, 7]$

C. $a \in [0.6, 1.5]$, $b \in [0, 7]$, $c \in [17.3, 20.6]$, and $d \in [3, 7]$

D. $a \in [7.3, 10]$, $b \in [0, 7]$, $c \in [2.1, 4.4]$, and $d \in [3, 7]$

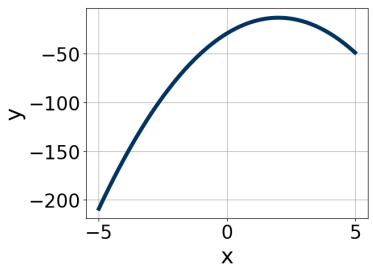
E. None of the above.

---

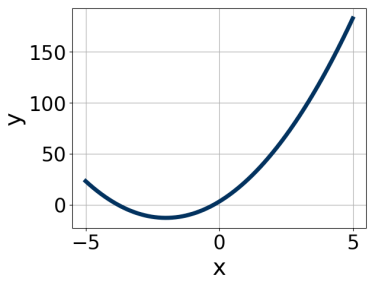
3. Graph the equation below.

$$f(x) = (x + 2)^2 - 13$$

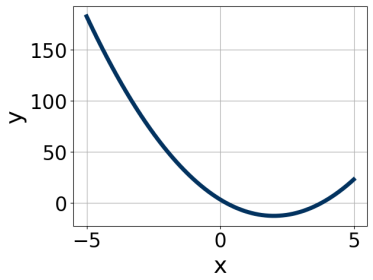
A.



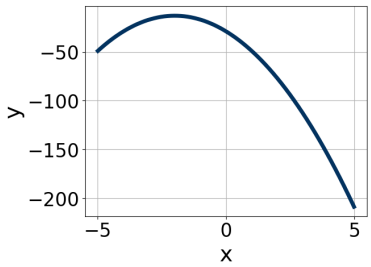
B.



C.



D.



E. None of the above.

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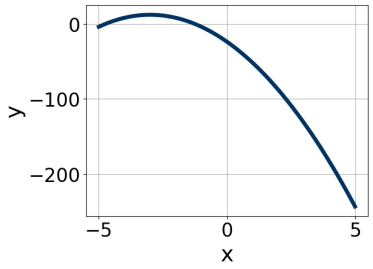
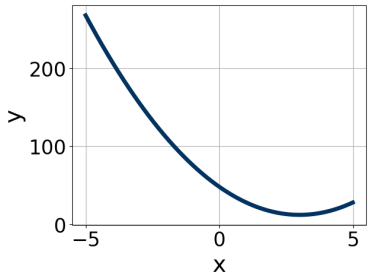
4. Graph the equation below.

$$f(x) = -(x-3)^2 + 12$$

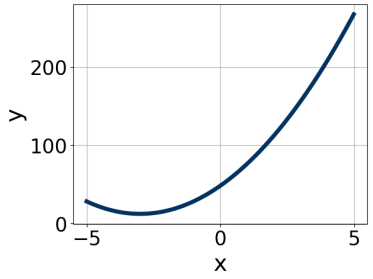
A.



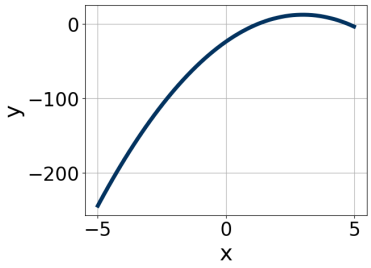
C.



B.



D.



E. None of the above.

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5. Solve the quadratic equation below. Then, choose the intervals that the solutions belong to, with $x_1 \leq x_2$ (if they exist).

$$-18x^2 + 8x + 4 = 0$$

A. $x_1 \in [-0.34, -0.07]$ and $x_2 \in [0.6, 1.3]$

B. $x_1 \in [-0.94, -0.35]$ and $x_2 \in [-0.6, 0.5]$

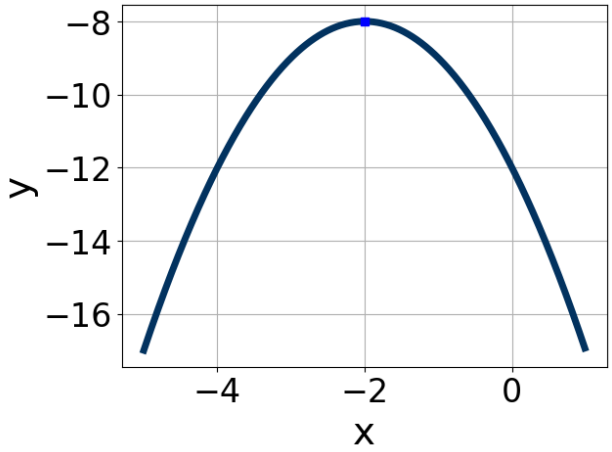
C. $x_1 \in [-18.95, -18.48]$ and $x_2 \in [18.1, 20.6]$

D. $x_1 \in [-13.41, -13.24]$ and $x_2 \in [3.9, 5.9]$

E. There are no Real solutions.

---

6. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that a, b, and c belong to.



A. $a \in [-0.1, 1.6]$, $b \in [-7, -3]$, and $c \in [-4, -1]$

B. $a \in [-0.1, 1.6]$, $b \in [3, 5]$, and $c \in [-4, -1]$

C. $a \in [-2.3, 0.7]$, $b \in [3, 5]$, and $c \in [1, 6]$

D. $a \in [-2.3, 0.7]$, $b \in [-7, -3]$, and $c \in [-12, -11]$

E. $a \in [-2.3, 0.7]$, $b \in [3, 5]$, and $c \in [-12, -11]$

---

7. Solve the quadratic equation below. Then, choose the intervals that the solutions x_1 and x_2 belong to, with $x_1 \leq x_2$.

$$25x^2 - 60x + 36 = 0$$

A. $x_1 \in [0.37, 0.5]$ and $x_2 \in [3.1, 5]$

B. $x_1 \in [29.95, 30.06]$ and $x_2 \in [28.7, 31.3]$

C. $x_1 \in [1.1, 1.58]$ and $x_2 \in [0.5, 1.8]$

D. $x_1 \in [0.08, 0.26]$ and $x_2 \in [3.9, 7.1]$

E. $x_1 \in [0.5, 0.95]$ and $x_2 \in [1.9, 3.4]$

---

8. Factor the quadratic below. Then, choose the intervals that contain the constants in the form $(ax + b)(cx + d); b \leq d$.

$$36x^2 - 60x + 25$$

A. $a \in [0, 1.08]$, $b \in [-31, -27]$, $c \in [0.5, 1.4]$, and $d \in [-38, -28]$

B. $a \in [1.67, 3.14]$, $b \in [-8, -1]$, $c \in [9.1, 14.6]$, and $d \in [-10, -3]$

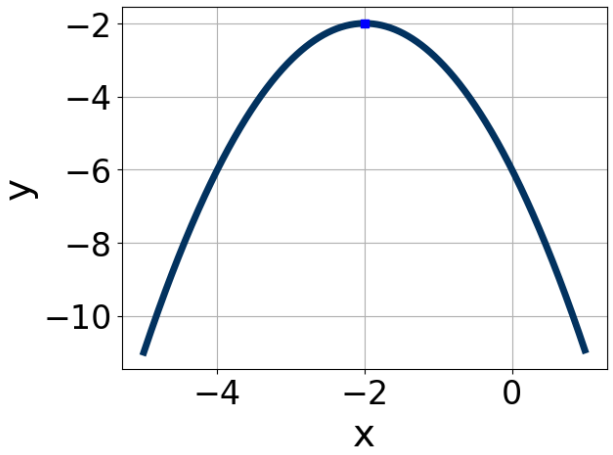
C. $a \in [11.14, 12.1]$, $b \in [-8, -1]$, $c \in [2.6, 4.8]$, and $d \in [-10, -3]$

D. $a \in [5.24, 6.79]$, $b \in [-8, -1]$, $c \in [3.7, 6.9]$, and $d \in [-10, -3]$

E. None of the above.

---

9. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that a, b, and c belong to.



A. $a \in [-2, 0]$, $b \in [1, 7]$, and $c \in [-7, -4]$

B. $a \in [1, 4]$, $b \in [-6, -3]$, and $c \in [0, 5]$

C. $a \in [-2, 0]$, $b \in [-6, -3]$, and $c \in [-7, -4]$

D. $a \in [-2, 0]$, $b \in [1, 7]$, and $c \in [-2, 1]$

E. $a \in [1, 4]$, $b \in [1, 7]$, and $c \in [0, 5]$

---

10. Solve the quadratic equation below. Then, choose the intervals that the solutions x_1 and x_2 belong to, with $x_1 \leq x_2$.

$$25x^2 + 15x - 54 = 0$$

A. $x_1 \in [-10.2, -8.91]$ and $x_2 \in [0.11, 0.33]$

B. $x_1 \in [-2.15, -0.9]$ and $x_2 \in [1.08, 2.44]$

C. $x_1 \in [-0.74, -0.47]$ and $x_2 \in [3.46, 4.1]$

D. $x_1 \in [-45.52, -42.96]$ and $x_2 \in [29.47, 30.44]$

E. $x_1 \in [-7.12, -4.54]$ and $x_2 \in [0.33, 0.57]$
